

# STAAR Alternate 2 Spring 2019

## Grade 8 Science Essence Statements

STAAR Reporting Category 1	STAAR Reporting Category 2	STAAR Reporting Category 3	STAAR Reporting Category 4
<p><b>Matter and Energy:</b> The student will demonstrate an understanding of the properties of matter and energy and their interactions.</p>	<p><b>Force, Motion, and Energy:</b> The student will demonstrate an understanding of force, motion, and energy and their relationships.</p>	<p><b>Earth and Space:</b> The student will demonstrate an understanding of components, cycles, patterns, and natural events of Earth and space systems.</p>	<p><b>Organisms and Environments:</b> The student will demonstrate an understanding of the structures and functions of living organisms and their interdependence on each other and on their environment.</p>
<p><b>Knowledge and Skills Statements</b>  <b>(8.5) Matter and energy.</b> The student knows that matter is composed of atoms and has chemical and physical properties. (Readiness Standard)  <b>(7.5) Matter and energy.</b> The student knows that interactions occur between matter and energy. (Supporting Standard)</p> <p><b>Essence Statement</b>            Recognizes that matter is composed of atoms, has distinct properties, and interacts with energy.</p> <hr style="width: 10%; margin: 10px auto;"/> <p><b>Knowledge and Skills Statements</b>  <b>(7.6) Matter and energy.</b> The student knows that matter has physical and chemical properties and can undergo physical and chemical changes. (Supporting Standard)  <b>(6.6) Matter and energy.</b> The student knows matter has physical properties that can be used for classification. (Supporting Standard)</p> <p><b>Essence Statement</b>            Recognizes the physical and chemical properties and changes of matter and how physical properties are used for classification.</p>	<p><b>Knowledge and Skills Statement</b>  <b>(8.6) Force, motion, and energy.</b> The student knows that there is a relationship between force, motion, and energy. (Readiness and Supporting Standard)</p> <p><b>Essence Statement</b>            Recognizes that relationships exist between force, motion, and energy.</p> <hr style="width: 10%; margin: 10px auto;"/> <p><b>Knowledge and Skills Statement</b>  <b>(6.9) Force, motion, and energy.</b> The student knows that the Law of Conservation of Energy states that energy can neither be created nor destroyed, it just changes form. (Supporting Standard)</p> <p><b>Essence Statement</b>            Knows that energy can neither be created nor destroyed but changes form.</p>	<p><b>Knowledge and Skills Statement</b>  <b>(8.7) Earth and space.</b> The student knows the effects resulting from cyclical movements of the Sun, Earth, and Moon. (Readiness and Supporting Standard)</p> <p><b>Essence Statement</b>            Knows that the phases of the moon, the seasons on Earth, and the day and night cycle are the result of cyclical interactions among Earth, the Moon, and the Sun.</p> <hr style="width: 10%; margin: 10px auto;"/> <p><b>Knowledge and Skills Statement</b>  <b>(8.8) Earth and space.</b> The student knows characteristics of the universe. (Readiness and Supporting Standard)</p> <p><b>Essence Statement</b>            Recognizes characteristics of the universe and its components.</p> <hr style="width: 10%; margin: 10px auto;"/> <p><b>Knowledge and Skills Statement</b>  <b>(7.8) Earth and space.</b> The student knows that natural events and human activity can impact Earth systems. (Supporting Standard)</p> <p><b>Essence Statement</b>            Recognizes the relationship between groundwater and surface water in watersheds.</p>	<p><b>Knowledge and Skills Statements</b>  <b>(8.11) Organisms and environments.</b> The student knows that interdependence occurs among living systems and the environment and that human activities can affect these systems. (Readiness and Supporting Standard)</p> <p><b>(7.11) Organisms and environments.</b> The student knows that populations and species demonstrate variation and inherit many of their unique traits through gradual processes over many generations. (Supporting Standard)</p> <p><b>Essence Statement</b>            Recognizes the interdependence of organisms with each other and with their environment.</p>

		<p><b>Knowledge and Skills Statement</b>  <b>(6.11) Earth and space.</b> The student understands the organization of our solar system and the relationships among the various bodies that comprise it. (Supporting Standard)</p> <p><b>Essence Statement</b>  Knows the organization and relationships among components of the solar system.</p>	<p><b>Knowledge and Skills Statement</b>  <b>(7.12) Organisms and environments.</b> The student knows that living systems at all levels of organization demonstrate the complementary nature of structure and function. (Supporting Standard)</p> <p><b>(6.12) Organisms and environments.</b> The student knows all organisms are classified into domains and kingdoms. Organisms within these taxonomic groups share similar characteristics that allow them to interact with the living and nonliving parts of their ecosystem. (Supporting Standard)</p> <p><b>Essence Statement</b>  Recognizes the classification of organisms.</p>
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